UNIVERSITY OF SWAZILAND

DEPARTMENT OF ACCOUNTING

SUPPLEMENTARY EXAMINATION PAPER

JULY 2015

ACADEMIC YEAR 2014/2015

PROGRAMME OF STUDY	:	**Bachelor of Commerce**
YEAR OF STUDY	:	**Year 3 (Full Time)**
TITLE OF THE PAPER	:	**Investment Analysis and Portfolio Management**
COURSE CODE	:	**AC 321 (S)**
TIME ALLOWED	:	**Three (3) Hours**
INSTRUCTIONS	1	**There are FOUR (4) questions, ANSWER ALL.**
	2	**Begin the solution to each question on a new page.**
	3	**The marks awarded for a question are indicated at the end of each question.**
	4	**Show your necessary workings.**

NOTE: **You are reminded that in assessing your work, account will be taken of accuracy of the language and the general quality of expression, together with layout and presentation of your answer.**

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR / SUPERVISOR.

SPECIAL REQUIREMENT: FINANCIAL CALCULATOR

QUESTION 1

(a) The September 14, 2009 price quotation for a Boeing call option with a strike price of $50 due to expire in November is $3.50 while the stock price of Boeing is $51. What is the premium on one Boeing November 50 call contract? **(2 marks)**

(b) You purchase one IBM March 120 put contract for a put premium of $10. What is the maximum profit that you could gain from this strategy? **(2 marks)**

(c) You buy one Hewlett Packard August 50 call contract and one Hewlett Packard August 50 put contract. The call premium is $1.25 and the put premium is $4.50. What is your highest potential loss from this position? **(2 marks)**

(d) Suppose you purchase one Texas Instruments August 75 call contract quoted at $8.50 and write one Texas Instruments August 80 call contract quoted at $6. If, at expiration, the price of a share of Texas Instruments stock is $79, what would be your profit? **(2 marks)**

(e) An investor is bearish on a particular stock and decided to buy a put with a strike price of $25. Ignoring commissions, if the option was purchased for a price of $0.85, what is the breakeven point for the investor? **(2 marks)**

(f) On January 1, you sold one April S&P 500 index futures contract at a futures price of 1300. If the April futures price is 1250 on February 1, how much would be your profit if you close your position? (The contract multiplier is 250.) **(2 marks)**

(g) The current level of the S&P 500 is 1250. The dividend yield on the S&P 500 is 3%. The risk-free interest rate is 6%. What should be the futures price quote for a contract on the S&P 500 due to expire 6 months from now? **(2 marks)**

(h) The spot price for gold is $650. The dividend yield on the S&P 500 is 2.5%. The risk-free interest rate is 5%. What should be the futures price for gold for a one year contract? **(2 marks)**

On Monday morning you sell one June T-bond futures contract at 97:27 or for $97,843.75. The contract's face value is $100,000. The initial margin requirement is $2,700 and the maintenance margin requirement is $2,000 per contract. Use the following price data to answer questions (i) and (j).

Day	Settle
Monday	**$97,406.25**
Tuesday	**$98,000.00**
Wednesday	**$100,000.00**

(i) After Monday's close what will be the balance on your margin account?
(j) At the close of day Tuesday what is your cumulative rate of return on your investment?

(4 Marks)

(Question 1 - Total marks : 20)

QUESTION 2

(a) Differentiate between a puttable bond and a callable bond. **(4 marks)**

(b) A coupon bond which pays interest of 4% annually, has a par value of $1,000, matures in 5 years, and is selling today at $785. What is the actual yield to maturity on this bond? **(2 marks)**

(c) A convertible bond has a par value of $1,000 but its current market price is $975. The current price of the issuing company's stock is $26 and the conversion ratio is 34 shares. What is the bond's market conversion value? **(2 marks)**

(d) A convertible bond has a par value of $1,000 but its current market price is $950. The current price of the issuing company's stock is $19 and the conversion ratio is 40 shares. What is the bond's conversion premium? **(2 marks)**

(e) A coupon bond which pays interest of $60 annually, has a par value of $1,000, matures in 5 years, and is selling today at a $84.52 discount from par value. What is the approximate yield to maturity on this bond? **(2 marks)**

(f) A coupon bond which pays interest of $60 annually, has a par value of $1,000, matures in 5 years, and is selling today at a $75.25 discount from par value. What is the current yield on this bond? **(2 marks)**

(g) If the quote for a Treasury bond is listed in the newspaper as 98:09 bid, 98:13 ask, the actual price for you to purchase this bond given a E10,000 par value is how much? **(2 marks)**

(h) A bond has a flat price of E985 and it pays an annual coupon. The last coupon payment was made 90 days ago. What is the invoice price if the annual coupon is E69? **(2 marks)**

(i) If the quote for a Treasury bond is listed in the newspaper as 99:08 bid, 99:11 ask, the actual price you can sell this bond given a E1,000 par value is how much? **(2 marks)**

(j) You buy an 8 year E1,000 par value bond today that has a 6% yield and a 6% annual payment coupon. In one year promised yields have risen to 7%. What is your one year holding period return? **(2 marks)**

(k) You purchased a 5-year annual interest coupon bond one year ago. Its coupon interest rate was 6% and its par value was $1,000. At the time you purchased the bond, the yield to maturity was 4%. If you sold the bond after receiving the first interest payment and the bond's yield to maturity had changed to 3%, what would have been approximately your annual total rate of return on holding the bond for that year? **(2 marks)**

(l) A coupon bond which pays interest annually, has a par value of E1,000, matures in 5 years and has a yield to maturity of 12%. If the coupon rate is 9%, what is the intrinsic value of the bond? **(2 marks)**

(m) A zero-coupon bond has a yield to maturity of 5% and a par value of E1,000. If the bond matures in 16 years, it should sell for a price of how much today? **(2 marks)**

(n) A 6% coupon Swaziland treasury note pays interest on May 31 and November 30 and is traded for settlement on August 10. What is the accrued interest on E100,000 face amount of this note? **(2 marks)**

(Question 2 - Total marks : 30)

QUESTION 3

(a) Explain the terms primary market and secondary market. **(4 marks)**

(b) (i) What is meant by firm commitment underwriting? **(2 marks)**

(ii) Mlamuli Mabuza Investment Ltd. sold 200,000 shares in an initial public offering. The underwriter's explicit fees were E90,000. The offering price for the shares was E35, but immediately upon issue, the share price jumped to E43. What is the best estimate of the total cost to Mlamuli of the equity issue? **(3 marks)**

(c) (i) What is meant by buying on margin? **(2 marks)**

(ii) Mciniseli Dlamini puts up E5,000 but borrows an equal amount of money from his broker to double the amount invested to E10,000. The broker charges 7% on the loan. The stock was originally purchased at E25 per share and in one year Mciniseli sells the stock for E28. How much is his rate of return? **(2 marks)**

(iii) The commission structure on a stock purchase is E50 plus E0.03 per share. If Ntombi Mavuso purchases 6 round lots of stock selling for E65, what is her commission? **(2 marks)**

(c) Siphosethu Maziya Traders opens a brokerage account, and purchases 300 shares of Royal Swaziland Sugar Corporation at E40 per share. She borrows E4,000 from Nonophile Dine, her broker to help pay for the purchase. The interest rate on the loan is 8%.
(i) What is the margin in Siphosethu's account when she first purchases the stock? **(1 mark)**

(ii) If the share price falls to E30 per share by the end of the year, what is the remaining margin in her account? **(2 marks)**

(iii) If the maintenance margin requirement is 30%, will she receive a margin call? **(1 mark)**

(Question 3 - Total marks : 19)

QUESTION 4

(a) A closed-end fund starts the year with a net asset value of E12.00. By year-end, its NAV equaled E12.10. At the beginning of the year, the fund is selling at a 2% premium to NAV. By the end of the year, the fund is selling at a 7% discount to NAV. The fund paid year-end distributions of income and capital gains of E1.50. What is the rate of return to an investor in the fund during the year? **(3 marks)**

(b) Lwazi Mavuso Fund had average daily assets of E2.2 billion in the past year. The fund sold E400 million and purchased E500 million worth of stock during the year. If Lwazi Mavuso Fund's expense ratio was 1.1% and the management fee was 0.7%,

(i) What were the total fees paid to the fund's investment managers during the year? **(2 marks)**

(ii) What were the other administrative expenses? **(2 marks)**

(c) Linda Zwane Investments Fund sells Class A shares with a front-end load of 6% and Class B shares with 12b-1 fees of 0.5% annually as well as back-end load fees that start at 5% and fall by 1% for each full year the investor holds the portfolio (until the fifth year). Assume the portfolio rate of return net of operating expenses is 10% annually. What will be the value of a E1,000 investment in Class A and Class B shares if the shares are sold after
(i) 4 years? **(3 marks)**

(ii) 10 years? **(3 marks)**

(iii) Which fee structure provides higher net proceeds at the end of each investment horizon? **(2 marks)**

(d) A mutual fund manager expects her portfolio to earn a rate of return of 11 percent this year. The beta of her portfolio is 0.8. If the rate of return available on risk-free assets is 4 percent and you expect the rate of return on the market portfolio to be 14 percent, should you invest in this mutual fund? **(3 marks)**

(e) If the risk-free rate is 6 percent and the expected rate of return on the market portfolio is 13 percent, is a security with a beta of 1.25 and an expected rate of return of 16 percent overpriced or underpriced? **(3 marks)**

(f) You have a E50,000 portfolio consisting of Shoprite, Pick 'n Pay and Spar. You put E20,000 in Shoprite, E12,000 in Pick 'n Pay and the rest in Spar. Shoprite, Pick 'n Pay and Spar have betas of 1.3, 1.0 and 0.8 respectively. What is your portfolio beta? **(2 marks)**

(g) A Legit share has an expected rate of return of 12% and a beta of 1.10. The market expected rate of return is 8% and the risk-free rate is 5%. What is the alpha of the stock? **(2 marks)**

(h) Consider the following two stocks, Truworths and Edgars. Truworths has an expected return of 10% and a beta of 1.20. Edgars has an expected return of 14% and a beta of 1.80. The expected market rate of return is 9% and the risk-free rate is 5%. Which security would be considered a good buy and why? **(3 marks)**

(i) A portfolio is composed of two stocks, SPTC and MTN. SPTC stock has a standard deviation of return of 35% while MTN stock has a standard deviation of return of 15%. The correlation coefficient between the returns on SPTC and MTN is 0.45. SPTC stock comprises 40% of the portfolio while MTN stock comprises 60% of the portfolio. What is the standard deviation of the return on this portfolio? **(3 marks)**

(Question 4 - Total marks : 31)

End of Question Paper